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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,476	12/03/2003	Gabriele Nelles	450117-03372.1	5895

20999 7590 08/26/2004
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EXAMINER

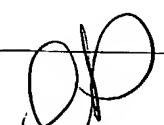
DIAMOND, ALAN D

ART UNIT PAPER NUMBER

1753

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/726,476	Applicant(s) NELLES ET AL.	
	Examiner Alan Diamond	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,4,7,10-17,31 and 63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3,4,7,10-17,31 and 63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/866,199.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12032003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. This application filed under former 37 CFR 1.60 lacks the necessary reference to the prior application. A statement reading "This is a continuation of Application No. 09/866,199, filed 05/25/2001, now U.S. Patent 6,700,058." should be entered following the title of the invention or as the first sentence of the specification.

Specification

2. The disclosure is objected to because of the following informalities: On page 9, at line 12, the term "anyway of" should be changed to "or". On page 9, at line 22, the term "either or in parallel" should be changed to "be". On page 11, at line 6, the word "than" should be inserted after "lower". On page 49, between lines 27 and 28, the heading "Brief Description of the Drawings" should be inserted. Appropriate correction is required.

Claim Rejections - 35 USC § 102/103

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 4, 7, 10-17, 31, and 63 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nakamura, U.S. Patent 6,291,763 B1.

Nakamura prepares a photo cell (i.e., instant solar cell) having the claimed components, wherein a molten salt or mixture of molten salts are used in a charge transporting layer (see abstract; col. 15, line 61 through col. 25, line 17; and Examples 1-3). The molten salts Y19, Y20, Y26, Y27, Y31, Y33, and Y35 in the table at cols. 18-25 are polymeric. It is the Examiner's position that said polymeric molten salts Y19, Y20, Y26, Y27, Y31, Y33, and Y35 exhibit a melting temperature lower than the operation temperature of the photo cell, such as about 140°C or less, since they are molten when used in the photo cell. Likewise, it is the Examiner's position that said molten salts Y19, Y20, Y26, Y27, Y31, Y33, and Y35 have a glass transition temperature, such as one of about 60°C or less, and are hole transporters. Solvent and iodine can be added to the instant molten salt, and said solvent or iodine reads on the instant dopant (see col. 25, lines 13-21). The semiconductor of the photocell can comprise nanoparticles of TiO₂ and be sensitized with a dye, such as a ruthenium complex (see col. 5, lines 1-14; col. 7, line 42 through col. 8, line 41; and Example 1 at col. 33). Since Nakamura teaches the limitations of the instant claims, the reference is deemed to be anticipatory.

In addition, the presently claimed limitation that the polymeric electrically conducting agent has a melting temperature lower than the operation temperature of photoelectric conversion device and has a glass transition temperature would obviously have been present once Nakamura's molten salt Y19, Y20, Y26, Y27, Y31, Y33, and Y35, or mixture thereof, is provided. Note In re Best, 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102.

Response to Arguments

6. Applicant's arguments filed December 3, 2003 have been fully considered but they are not persuasive.

Applicant argues that in Nakamura there is no teaching or suggestion of substances having a glass transition temperature or being a polymer. However, this argument is not deemed to be persuasive because, as noted above, it is the Examiner's position that Nakamura's polymeric molten salts Y19, Y20, Y26, Y27, Y31, Y33, and Y35 in the table at cols. 18-25 exhibit a melting temperature lower than the operation temperature of the photo cell, such as about 140°C or less, and have a glass transition temperature, such as one of about 60°C or less.

The Examiner agrees with Applicant that the liquid crystals of Ono (US 6,495,067) do not have a glass transition temperature. Accordingly, Ono does not anticipate or render obvious instant claim 3 and its dependent claims.

Conclusion

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7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,700,058 is hereby made of record.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Diamond whose telephone number is 571-272-1338. The examiner can normally be reached on Monday through Friday, 5:30 a.m. to 2:00 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alan Diamond
August 25, 2004

Alan Diamond
Primary Examiner
Art Unit 1753

